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ABSTRACT

This study focuses on current policies of selection, training, and evaluation of teachers, and on currently available methods and resources to improve these policies. Annotations and abstracts are presented of recent studies on the following topics: (1) teacher quality; (2) public opinion of the public schools; (3) identifying effective education; (4) methods and practices of evaluation; and (5) efforts to improve teaching. A brief summary of key points follows each topic. Discussion and conclusions on insuring competency in certified teachers, employing the best of those certified, and insuring continued professional growth of teachers subsequent to employment are presented, and recommendations are made. Appendixes include data on the Scholastic Aptitude Test and the National Teacher Examination, a list of 85 effective teacher competencies, and 12 recommendations for a quality teacher evaluation system. (JD)

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# TOWARD A MORE EFFECTIVE TEACHING FORCE: ATTRACTING, PREPARING, AND EVALUATING OUR NATION'S EDUCATORS

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## INTRODUCTION AND STATEMENT OF THE PROBLEM

As standardized test scores and other indicators of academic ability decline, and with the resurgency of press coverage on illiteracy rates, public concern grows, and we, as a nation, become more and more dissatisfied with the quality of education in the public schools. There appears to be almost universal agreement among educators that classroom teaching strategies are the number one concern regarding teacher competence (Campbell and Williamson, 1974). Educators and laypersons alike have long recognized a substantial variance in teacher ability from classroom to classroom; and further, that students benefiting from exposure to higher quality teachers generally achieve greater educational accomplishments than those students placed in classrooms of teachers with lesser ability.

If we, as a nation, are to continue to compete in an increasingly technical world marketplace, we must take steps to assure that our educational system is the best possible, given current resources. Certainly the degree of excellence in our teaching staffs merits careful consideration. We should develop strategies to improve the general level of competence and effectiveness in our teachers in order to promote greater educational achievements by our students. Further, we must seek various methods of securing additional resources in a continual, ongoing effort to upgrade the effectiveness of our educational system.

## PURPOSE AND LIMITATIONS OF THE STUDY

The purpose of this study is not to determine the degree of effectiveness or ineffectiveness of teachers. Rather, it is assumed that even the best of teachers can improve their effectiveness with additional knowledge and resources. Where teacher quality is reviewed, a deliberately biased selection provides ample evidence that there is cause for concern.

This paper, then, primarily focuses on current policies of selection, training, and evaluation of teachers, and on currently available methods and resources to improve these policies. It was hoped that certain methods and techniques would be directly applicable at the classroom level. To a limited degree, this was found to be true.

## ORGANIZATION OF THE STUDY

Annotations are grouped into five categories with brief summaries following each. A few articles were sufficiently broad in scope to merit attention in more than one section. Where these cases exist, the abstract is included in the most pertinent section. References in other section summaries include special notation indicating the abstract location, ie. Sage (14).

The discussion and conclusions, comprising three main sections, are presented concurrently. Recommendations follow each of these sections. A final comment is included.

## TEACHER QUALITY

Ishler, Richard E. "Requirements for Admission to and Graduation from Teacher Education." Phi Delta Kappan. Vol. 66, No. 2, 1984.

Ishler mailed surveys to 103 institutions that were members of the Association of Colleges and Schools of Education in State Universities and Land Grant Colleges and Affiliated Private Universities. With a 64% return rate, Ishler claimed his sample to be representative of Colleges of Education at major U.S. universities. Results indicated typical admission requirements: 43-47 semester hours, 2.25 minimum GPA, passing score on a basic skills test in reading, writing, and mathematics, and experience in working with children.

Typical graduation requirements were: 126 semester hours, 47-51 hours in general education, 29-35 hours in content or specialization area, 28-30 professional education hours, 92-144 actual hours of field experience in addition to student teaching, and a 2.25 minimum GPA in content area and professional education courses.

Clark, David L. "Better Teachers for the Year 2000: A Proposal for the Structural Reform of Teacher Education." Phi Delta Kappan. Vol. 66, No. 2, 1984.

Clark was extremely critical of the state of teacher education in the U.S. His primary concern was the sheer number of schools of education. Seventy per cent of the four year colleges and universities in the U.S. operate state-approved teacher training programs. This reality ensures that resources, both human and financial, are diluted to the point to make meaningful reform on a large scale impossible.

Typically, the faculty at these institutions are not involved in the production of knowledge about education; consequently most teacher training is divorced from the educational research centers. All recent national reports indicated dissatisfaction with teacher education programs.

Clark was strongly in favor of changing teacher certification requirements to include a five, rather than a four year course of study. This would simultaneously allow more thorough preparation and limit the number of schools able to offer education programs.

Olsen, Dwayne G. "The Quality of Prospective Teachers: Education vs Non-Education Graduates." Journal of Teacher Education. Vol. 36, No. 5, 1985.

Olsen reported a comparative analysis using data from SAT's, ACT's, GPA's, high school rankings, and freshman English grades. Among other findings, Olsen found high school seniors in 1982 intending to major in education scored 32 points lower in SAT-V and 48 points lower in SAT-M than non-education seniors. Compared with all college bound seniors, education majors ranked 33rd of 36 fields of study. More specifically, he reported that elementary education majors in their senior year rated sixth of seven majors examined (just above physical education) based on SAT's.

Weaver, W.T. "Solving the Problem of Teacher Quality, Part 1." Phi Delta Kappan. Vol. 66, No. 2, 1984.

This article reviewed data which indicated generally declining intellectual abilities in teachers. It then tied this overall decline, including some transient variations, to the market forces of supply and demand and their effects on relative teacher salaries.

Weaver used a multitude of data from college records, the National Longitudinal Study (NLS), achievement test scores, and SAT's, to name a few. Among the findings were (1) between 1970 and 1979 teacher education programs accepted nine of ten applicants; (2) education was the least selective field from admission to graduation of all major fields for which data are available; (3) fewer than half of the teacher education graduates in 1976 had SAT scores as high as the average high school seniors four years earlier--or, stated another way, 60% of the high school seniors in 1972 had SAT scores higher than the median score of the 1976 teacher education graduates (See Appendix A).

Weaver gave evidence to suggest that this phenomenon was recent--since 1960, and pointed to research verifying a correlation between high teacher test scores and student achievement: for each point on teacher SAT-V, a .175 point increase for blacks and a .179 increase for whites was observed. He interpreted the 1970's as a vicious circle of teacher glut followed by reduced education school enrollments resulting in reduced entry requirements, which led back to a new, lower-caliber, teacher glut. He further found that the primary reason for teachers leaving the profession was money.

Weaver demonstrated that the academic quality of teaching was a function of the supply and demand in the total education labor market. Sources of correlations between increased teacher salaries and teacher test scores were somewhat vague. Weaver saw many problems with restricting entry into the profession at any level: teacher shortages, exorbitant wages, political

unpopularity (due to expense), and lack of support from schools of education faculty (their jobs are at stake!). Raising teacher salaries to a competitive level was seen as the best method of raising teacher abilities but at the same time politically unfeasible.

Weaver, W.T. "Solving the Problem of Teacher Quality, Part 2." Phi Delta Kappan. Vol. 66, No. 3, 1984.

Further justifying that raising standards in schools of education was not a workable solution, Weaver stated "...when the alternative is extinction, a faculty--regardless of discipline, will sacrifice standards to save itself." He further suggested that education schools must shift their criteria for preparedness from amassing numbers of credits and taking certain courses to the mastery of specific skills and competencies.

In order to balance the supply and demand for teacher education graduates, Weaver suggested that education schools diversify. Emphasize the value of the training programs to those who wish to teach in business, industry, and other sectors, resulting in a reduced dependency of the teacher training institutions on the teacher job market, thus allowing for greater selectivity from a larger applicant pool. Weaver mentioned such diversification already underway at Boston University, George Washington University, The University of Texas at Austin, and the University of Pittsburg.

National Commission on Excellence in Education. A Nation at Risk: The Imperative for Reform. U.S. Government Printing Office, 1983.

Secretary of Education Bell created the commission in August, 1981. Six specific areas of concern were given particular attention. While a few positive findings were mentioned, in general the report was a scathing rebuke:"If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war."

The report compared standardized test scores and other generally accepted scholastic indicators of U.S. students with prior students and with students in other industrialized nations and found present students' achievement to be inferior in nearly every respect.

Findings and recommendations were made regarding content, standards, time, teaching, and leadership. Focusing on teaching it was found, among other things that the average salary after 12 years was $17,000; that teacher shortages existed in areas such as math and science; that fewer than one third of U.S. high schools offered physics taught by a qualified teacher; and that

education schools' requirements were weighted heavily in methods courses.

Among seven recommendations for teaching, it was suggested that salaries be increased, that they be professionally competetive, market sensitive,and performance based. Recommendations as to how this should be accomplished were not discussed.

Weaver, W.T. "In Search of Quality: The Need for Talent in Teaching." Phi Delta Kappan. Vol. 61, No. 1, 1979.

Weaver spent two years conducting research on teacher training and the teaching profession as they relate to three conditions: a decline in the teaching job market, a shift in student preferences away from education, and a sharp decline in test scores of students in education.

Average SAT scores for future educators in 1976 were 34 points below average on verbal and 43 points below average for math. Of nineteen fields of study reported by ACT for college freshmen in 1975-76, education majors ranked seventeenth in math and fourteenth in English. The National Longitudinal Study (NLS) (1976) found only two groups out of sixteen scoring lower than teachers on SAT-V; office clerical and vocational-technical; and only the office-clerical scored lower in math. GPA's of education majors were twelfth of sixteen. NLS data indicated teacher education showed the least selectivity from applicant to degree of any field of study.

Schlechty, Phillip C. and Vance, Victor S. "Do Academically Able Teachers Leave Education? The North Carolina Case." Phi Delta Kappan. Vol. 63, No. 2, 1981.

This North Carolina study examined 32,131 public school teachers hired between 1973 and 1980. Among numerous findings, Schlechty and Vance found that--NTE scores showed a steady eight year decline for white females (two thirds of teaching force); that all teachers scored lower on various standardized achievement tests than their predecessors; and that for all teachers, those with the highest NTE scores were those that were most likely to leave the profession.

Schlechty and Vance maintained that while NTE scores were not universally accepted as accurate predictors of teacher quality, they did correlate highly with college GPA's, GRE's, and SAT's.

Among points of discussion were fears of stricter selection criteria for teachers producing teacher shortages, and market forces affecting females differently than males.

Perry, N. "New Teachers: Do the Best Get Hired?" Phi Delta Kappan. Vol. 63, No. 2, 1981.

Based on a review of the literature and original research, Perry concluded that academic criteria played no significant role on the hiring of new teachers. A 1976 national comparison of those who did and did not find teaching jobs showed that on four of five measures of competence in mathematics, reading, and vocabulary, those not employed had higher scores than those who were. A 1977 random sample of new teachers in Dallas showed 55% not able to pass the Wesman Personal Classification Test of basic skills; only(?) 36% of the applicants failed; 54% of the new administrators failed. Perry found the most significant independent predictor of teaching competence was grade-point average. Raising of standards in schools of education was also suggested.

## TEACHER QUALITY--SUMMARY

Evidence that teacher education has "been held in relatively low regard for years" was reported by Gage (Gage, 1984:87--14). Clark reported evidence of a general lack of academic excellence in schools of education nationwide. While many colleges and universities are reacting to pressures to upgrade requirements for education, it appears that these efforts have not been effective as screening tools (Weaver, 1984). Ishler found standards apparently adequate; closer scrutiny revealed, however, that the requirements were almost exclusively internal. Requirements of hours, courses, and even GPA's do not insure proficiency if the quality or requirements of the courses are substandard.

Standards set for competency tests are, for the most part, too low to be of any real value (Weaver, 1984). When compared with other disciplines, education students rank poorly. Olsen,

Weaver, Andrews ( 1982--13) Schlechty and Vance, and others have found current education students' scores on nearly all standardized tests for which scores are available markedly inferior to both their predecessors and to other professions. (See Appendix A for SAT scores for various fields from 1973-1981) Perry not only found declining scores for educators, but, further, that the best of the pool were not hired.

Andrews, and National both found a severe lack of qualified teachers in math and science. National reported that less than one-third of U.S. high schools had a qualified physics teacher. Hathaway (1982--11) reported less than one-half of one percent of teachers were dismissed from the classroom.

## PUBLIC OPINION

Gallup, Alec. "The Gallup Poll of Teachers' Attitudes Toward the Public Schools, Part 1." Phi Delta Kappan. Vol. 66, No. 2, 1984.

From a list provided by Market Data Retrieval, a representative sample of 2000 teachers were sent questionaires through the mail. Eight hundred thirteen were completed and returned. One hundred telephone interviews were conducted with non-respondents and results were found to closely parallel the respondents in terms of attitudes, socioeconomic and demographic characteristics.

Attitudes of teachers were markedly different from the general public in almost all areas of the survey. Seventy-eight per cent of the teachers graded peers with A or B ratings; while only 50% of the public gave a similar rating. According to teachers, the biggest problem in the schools is parental support; parents feel discipline is. The public and teachers named low salaries and discipline problems as the top two reasons that teachers leave the profession; yet 48% of the public felt that teacher pay was either about right or too high, while 90% of the teachers felt it was too low. Contrary to the positions of the professional organizations, 63% of the teachers and 89% of the public are in favor of state board examinations for teachers. Several other areas were considered, not of direct concern to this paper.

Gallup, Alec. "The Gallup Poll of Teachers' Attitudes Toward the Public Schools, Part 2." Phi Delta Kappan. Vol. 66, No. 5, 1985.

It was reported that of the 30 odd issues polled, teachers and the general public disagreed on two-thirds. Teachers rate their contribution to society highest and their status lowest in relation to other professions. While the public rates teachers status slightly higher, it is still one of the lowest--teaching had the greatest disparity between contribution to society and status in the community (See Appendix B).

Hathaway, Walter E. "Research and Evaluation Challenges to Myths of Education. ERIC DOC. No. ED 235 199, 1982.

Three common criticisms of the public education system were identified as myths: (1) the students are no good; (2) the schools are no good; and (3) the teachers are no good. Findings of a 1981 poll showed only 20% of the population truly happpy with the public schools and a full 60% were opposed to any increase in financial support. Hathaway indicated that society, not the schools, was producing children less prepared to learn. His boasts of quality teachers were based on those who responded favorably to a questionaire about attitudes and ambitions. He also indicated that while as many as 10,000 teachers were dismissed annually, that this figure represented less than one half of one per cent of all public school teachers in the U.S.

## PUBLIC OPINION--SUMMARY

For the most part, the public is not particularly satisified with their public schools, nor with their teachers. Gallup found only half of the public willing to give teachers an A or B grade. The public labeled teachers with a relatively low status ranking, and few wanted their children to enter the profession (Gallup, 1985, Investing, 1985--29). Nearly 90% supported state board examinations for teachers, yet they were unwilling to offset the teacher shortages that would inevitably occurr, with commensurate financial compensation. Gallup reported that nearly half of the population believed teachers' salaries were either about right or too high. Hathaway found only 20% truly happy with the schools and 60% opposed any increased funding.

## IDENTIFYING EFFECTIVE EDUCATION

Coleman, J., et al. Equality of Educational Opportunity., DHEW OE-38000, Washington, D.C., Government Printing Office, Sept., 1966.

This 700+ page government document primarily examined the availability of equal educational opportunities for individuals by reason of race, color, religion, or national origin in public educational institutions at all levels in the U.S. The survey addressed itself to four major questions: (1) to what extent are racial and ethnic groups segregrated, (2) whether schools offer equal educational opportunities in terms of other criteria regarded as indicators of educational quality, (3) how much students learn as measured by standardized achievement tests, and (4) to discern possible relationships between students' achievements and the kinds of schools they attend.

The concern of this study is primarily with question four. It was found that minority students' achievements were affected more (20%) than whites (10%) by the schools they attended and the teachers they had.

The quality of teachers showed a very strong relationship (more than school facilities or class size) to pupil achievement--and that relationship was progressively higher at higher grades. Teacher quality was determined by educational background and scores on verbal skills tests. (Note: Subsequent re-evaluation of this data by others has produced conflicting results.)

Summers, D. and Wolfe, E. "Do Schools Make a Difference?" American Economic Review. Vol. 67, No. 4, 1977.

Six hundred twenty-seven randomly selected elementary students from 103 randomly selected schools from the Philadelphia School district were examined. Similarly, 553 eighth-grade students from 42 junior high schools were selected. It was assumed that student achievement was a function of (1) genetic endowment and socio-economic status, (2) teacher quality, (3) non-teacher school quality, and (4) peer group characteristics. Pupil specific data over a six year period were analyzed on the basis of these assumptions and achievement test scores. Conclusions in regard to teacher quality were: Teachers who received B. A.'s from higher rated colleges were associated with students whose learning rate was higher. An inverse relationship was found between student learning and teacher scores on the National Teacher Exam. Teacher experience was generally found to be a positive factor, as was teacher verbal ability.

Andrews, Theodore E. "Current Issues in Teacher Education: From a State Perspective." ERIC DOC. No. ED 228 159, 1982.

Divided into six chapters, this article discussed a variety of issues and problems associated with attracting and retaining an adequate number of competent teachers. Andrews identified three areas that differentiate effective teachers (1) time management--instruction in large groups, with non-academic time kept to a minimum, (2) classroom climate--immediate direct feedback, ample praise, strict expectations, and (3) quality of instruction--asked low order questions and did not excessively encourage pupil questions.

Andrews predicted future teacher shortages and suggested that traditionally standards had been lowered to assure adequate numbers of "warm bodies." Suggested solutions included higher salaries and changed working conditions (i.e. partime faculty, teacher input into important decisions, carreer ladders). He pointed out that in 1981-82 over half of the math and science teachers were credentially unqualified. He supported extensive formative evaluation (improvement as an objective rather than employment decisions) and noted a difference between beginning competence and professional excellence.

Andrews suggested three areas for certificaton requirement improvement--tests for basic skills mastery and knowledge in the content area, and on the job performance ratings. He reviewed the Florida situation where the state required an 835 SAT score (40th percentile) for certification and lost 25% of the candidates overall and 92% of the minority applicants. Further, any screening will have a disproportionate effect on minorities. Criterion referenced tests were the most defensible and have high content validity. Another outcome would be that the persons selecting the test items would indirectly dictate the teacher education curriculum.

Medley, Donald M. "Teacher Competence and Teacher Effectiveness: A Review of Process-Product Research. ERIC DOC. No. ED 143 629, 1977.

A comprehensive review of teacher effectiveness research, this article focused on student performance in reading and math in grades one through eight. Of the original 732 titles considered, only those with new data demonstrating long-term gains of students using objective classroom data and containing at least one process-product correlation significant at the 5% level were analyzed. Of these 14, all were large scale with low socioeconomic subjects in primary grades. It was noted that those teachers employing direct instruction techniques were associated with relatively higher achievement gains for students,

more positive attitudes toward school, and high self-concepts. Further, five distinguishable teacher tasks were consistently highly correlated with superior student achievement:

1. Maintaining students' task involvement
2. Teaching in large groups (lecture format)
3. Minimizing disruptive behavior
4. Managing small group activity (used less by effective teachers but certainly not dispensible)
5. Supervising seatwork (immediate feedback, high student success)

Medley also referred to studies which confirmed that teachers trained to behave accordingly, significantly improved the students' achievement. One limit to the process-product strategy was the disregard for teacher objectives.

Gage, N.L. "What Do We Know About Teaching Effectiveness?" Phi Delta Kappan. Vol. 66, No. 2, 1984.

Gage showed evidence that teacher education had been "... held in relatively low regard for years. Widespread doubt about the efficacy of teacher education, even among teachers themselves is not uncommon." He pointed out that in four major studies (The National Commission on Excellence, The Task Force On Education for Economic Growth, the College Entrance Exam's Report, Academic Preparation for College, and the report of The Twentieth Century Fund's Task Force on Federal Elementary and Secondary Education Policy), none addressed the issue of how the curriculum was taught.

Gage spent a great deal of time defending the importance of "weak relationships" and demonstrated that a correlation of .2 could actually translate into an outcome difference of 33%. "Implications of research for practice depend not on the size of the effects but on the costs and benefits of any change in practice.

He cited nine experiments in which teachers were randomly assigned to trained or control groups, and pre-post test data on student achievement and attitude were taken at the beginning and end of a full semester or year. Results were positive and substantial for eight of the nine.

Brophy, Jere and Good, Thomas L. "Teacher Behavior and Student Achievement." in Wittrock, M.C. ed. Handbook of Research on Teaching, 3rd Edition. Macmillan, New York, 1986.

A superlative and comprehensive review of the research from 1973-1983, this 50 page article built on similar chapters from the 1963 and 1973 yearbooks. Earlier experiments often linked teacher personal traits with ratings by supervisors. Studies reviewed in this article were primarily process-product design, linking teacher behaviors with student achievement. The review includes well over 200 references, many of which were specifically detailed.

In general, the bulk of the research indicated that maximum student achievement is related to the folowing teacher behaviors:

1. Brisk but appropriate pacing of material (most consistently replicated)
2. Greater time on task--minimized management time
3. Greater student success rate, both written and oral
4. Greater teaching time rather than student work time
5. Presentations organized with overviews, advanced organizers, reviews, etc., and clear but repetitive yet enthusiastic deliveries
6. Most teacher questions (75%?) elicit correct responses and are low-cognitive level
7. Insist on overt student responses and provide immediate feedback without overdoing praise

Brophy identified the most definitive results of the studies as (1) time on task, and (2) highly structured presentation of new material related to things already learned followed by closely monitored drill and practice.

Several concerns were identified in regard to use of this data for summative measurement. Among them were the fact that the studies failed to account for situation-specific methodological differences (ie. introduction vs review), and, for the most part, optimum levels of these behaviors have not been determined for any situation (too much of a good thing is still too much).

## IDENTIFYING EFFECTIVE EDUCATION--SUMMARY

Evidence that teacher quality can make an impact on students' achievement has been reported by Coleman, Murnane (29), Summers and Wolfe, Andrews, Medley, Gage, Brophy and Good, and others. Correlations between teacher verbal skills and student achievement were found by Coleman, Murnane, and Summers and Wolfe. Summers and Wolfe reported teachers from more selective universities positively correlated with student achievement. Andrews, Medley, and Brophy and Good all identified analogous teacher behaviors that consistently result in relatively high student achievement gains. These behaviors fall into one of three categories: time management, classroom climate, and quality of instruction. Medley and Gage each found that teachers trained to behave in a manner consistent with these findings also elicited higher student achievement gains as well as more positive attitudes.

## METHODS AND PRACTICES OF EVALUATION

Steelman, Lala Carr and Powell, Brian. "Appraising the Implications of the SAT for Educational Policy." Phi Delta Kappan. Vol. 66, No. 9, 1985.

This article identified the concept of "corrected SATS" for state or group comparisons. Based on the test population, the average SAT fluctuated considerably. For example, as the number of females goes up, the Math scores go down; as the number of low income students goes up, the general scores go down. These considerations made a substantial difference in ranking the states. A few examples:

| | Raw Rank | Corrected Rank |
|---|---|---|
| Arkansas | 12.5 | 45 |
| Maryland | 38.5 | 1 |
| New York | 35.5 | 5.5 |
| Oklahoma | 11 | 44 |

Correlations made with corrected rank orders indicated that per pupil expenditures were the most significant variable considered, much more so than, for example, the amount of academic instruction time.

Piper, Martha K. and O'Sullivan, Patricia S. "The National Teacher Examination: Can it Predict Classroom Performance?" Phi Delta Kappan. Vol. 62, No. 5, 1981.

In a study of 32 randomly selected University of Houston preservice teachers, the university supervisors rated education majors using the Performance Evaluation Instrument (PEI) which was designed to measure classroom competencies. The ratings ranged from high to low and the correlation to the NTE was found to be .93 with a probability of $p < .05$.

Quirk, Thomas J., et al. "Review of the Studies of the Concurrent and Predictive Validity of the National Teacher Exam." Review of Educational Research. Vol. 43, No. 1, 1973.

This article comprehensively reviewed the literature on the NTE through 1973. Over 50 articles were examined and compared and the results summarized. A score often referred to was the Weighted Common Examinations Total (WCET) which is a combination of assessments of knowledge in both professional and general education, and in communication skills.

Sixteen studies found correlations ranging from .23 to .74 with a median of .55 for WCET scores and undergraduate GPA. WCET scores were not correlated highly with college supervisor or principal ratings during student teaching; -.03 to .18 with a median of .05. Nor do they correlate favorably with first year, on the job, evaluations--median value .11.

Quirk pointed out that the apparent general lack of validity of the NTE does not mean it is without value. It was noted that on the job ratings were "notoriously unreliable" and that they sought to measure different things. (See Appendix C)

Teacher Testing and Assessment: An Examination of the National Teacher Examinations (NTE), the Georia Teacher Certification Test (TCT), the Georgia Teacher Performance Assessment Instrument (TPAI) for a Selected Population." ERIC DOC. No. ED 229 441, 1982.

The Southern Regional Education Board Task Force on Higher Education and the Schools called for states "to consider the feasibility of developing a regional assessment of teacher selection techniques." The task force was critical of norm referenced rather than criterion referenced tests (ex. NTE) for teacher evaluations. It further reported that most systems of teacher evaluation had unacceptably low reliability and validity. The general conclusions were not encouraging: "The existing research base is not consistent as to the relationship between teacher testing and student criterion, or teacher performance assessment and student outcomes. Previous research and this study tend to support the idea that a teacher's knowledge base, as measured by a paper-and-pencil test, does not have a linear relationship with the ability to 'put it across.'" Despite these general conclusions, the task force highly recommended requiring minimal competency of teacher applicants on content areas.

Menacker, Julius. "Teacher Upgrading: Policy Alternatives." Education Forum. Vol. 50, No. 2, 1986.

Concerned with the effects of entry level tests for teachers on minorities, Menacker suggested various alternatives such as progressive testing, on-going training requirements, optional testing for higher pay, and rigorous evaluation during teacher probation periods. Among other findings, Menacker reported that currently 17 states required teacher education candidates to pass pre-admission basic skills tests and that by 1988, 29 states will require success on some standardized test, either for admission to teacher education programs or for certification. Shanker (AFT

president) was calling for a national certification exam for all beginning teachers.

Court response to charges of racial bias have been fairly clear. In 1977 in U.S. vs South Carolina, a disproportionate number of minorities failed the NTE and could not teach in South Carolina. The ruling--the practice was upheld and later affirmed by the U.S. Supreme Court; no discriminatory intent, only a disproportionate effect.

In some cases the disproportionate effect is large: in Georgia the State Teacher Competency Test revealed 87% of whites passed on the first try compared to 34% of blacks, and in California the Teacher Qualifying Test showed 76% of whites passed while only 39% of Hispanics and 26% of blacks were successful.

Lines, Patricia M. "Testing the Teacher: Are There Legal Pitfalls?" Phi Delta Kappan. Vol. 66, No. 9, 1985.

Lines identified 17 states that required some testing of new teachers. In regard to these competency tests and minority discrimination, Lines found that courts upheld the practice so long as the test or the results were not intentionally race or sex biased and it (the test) had a legitimate, job-related purpose. Among others, the author reported the case of Washington vs Davis in which the U.S. Supreme Court accepted the District of Columbia screening test for police recruits, though it disqualified a disproportionate number of blacks.

Streifer, Philip A. and Iwanicki, Edward F. "The Validation of Beginning Teacher Competencies in Connecticut." ERIC DOC. No. ED 265 148, 1985.

A panel of outstanding Connecticut educators (selection process not detailed) used a two round modified Delphi approach to determine which competencies were important measures of teaching effectiveness. A second phase involved a random sample of 2743 Connecticut teachers and administrators who were surveyed to confirm/modify the proposals from phase one. Streifer and Iwanicki then used factor analysis to determine construct validity and assure a link between the identified competencies and the literature on teacher effectiveness. Fifteen areas contained 85 competencies, 45 of which could be assessed through direct observation. (See Appendix D)

Additionally, ten effective teacher characteristics were identified: 1. Friendly vs aloof
2. Orderly and well prepared
3. Imaginative vs routine

4. Favorably inclined toward students
5. Favorably inclined toward democratic classroom
6. Favorably inclined toward colleagues
7. Learning centered vs child centered viewpoint
8. Superior verbal ability
9. Emotionally stable
10. Not likely to select only sociably acceptable responses

Medley, Donald M. "Teacher Effectiveness." in Metzel, H.E. ed. Encyclopedia of Educational Research, Fifth Edition. Vol. 4. Macmillan, New York, 1982.

Among other findings similarly reported (Medley 1977), Medley determined that the same teacher in different classes correlated with student achievement, on the average, at about .30. Thus, if evaluated on the basis of student achievement alone, teachers rated as the most effective one year may very well be rated as one of the least the next.

Rosenshine, Barak. "The Stability of Teacher Effects Upon Student Achievement." Review of Educational Research. Vol. 40, No. 5, 1970.

This limited review identified four types of studies regarding teacher consistency: (a) long-term studies in which teachers taught the same material to different students, (b) short-term studies in which teachers taught the same material to different students, (c) short-term studies in which teachers taught different material to the same students, and (d) short-term studies in which teachers taught different material to different students. Positive and consistent correlations were obtained in both (a) and (b) with the significant results highest in (b). In (a) and (b) type studies the stability coefficients were all positive (r"s = .22 to .70) and most were significant. In (c) and (d) studies the correlations were erratic and rarely significant. Control over variation in teacher behavior was seen as a key to the data.

Soar, Robert S. et al. "Teacher Evaluation: A Critique of Currently Used Methods." Phi Delta Kappan. Vol. 65, No. 4, 1983.

Soar identified three most often used methods of teacher evaluation: (1) tests to measure teacher characteristics (ie. NTE or minimum competency tests); (2) students' achievement test scores; and (3) ratings of teacher performance in the classroom. He discredited each method in turn for, lack of correlation between teacher characteristics and student achievement gain, confounding influences on student achievment and the limitations on what achievement tests measure, and poor rating scales improperly administered and confounded by the "halo effect," (overall impression affecting specific judgements) respectively.

Soar expounded upon teacher rating scales, criticizing the traditional "high inference" scales in which a teacher's rating is abstracted from the behavior it represents. Recommendations included the development and use of appropriate "low inference," structured observation forms, in which each item on the form defines a specific behavior, the judgements for which have been predetermined. Use of such low inference scales were shown to greatly increase both reliability and validity. Development of the scoring keys for these scales should be based on current research and subjected to empirical testing.

Waters, Cheryl M. and Wyatt, Terry L. "Toledo's Internship: The Teacher's Role in Excellence." Phi Delta Kappan. Vol. 66, No. 5, 1985.

This article described the development and procedures of the cooperative union/management program of teacher evaluation in Toledo, Ohio. Since 1981 the Intern-Intervention Program has used experienced teachers to train and evaluate beginning teachers. At the time of writing, seven consulting teachers were overseeing 70 beginning teachers. Consulting teachers were released from classroom responsibilities for a three year period and given an additional stipend.

A review panel of both teachers and administrators oversaw the consulting teachers and accepted or rejected their recommendations. Effectiveness had won over most opponents. Administrators originally opposed had come full circle to write letters of commendation: "Teachers can now be effectively evaluated and helped without union confrontation."

Wise, Arthur E. et al. "Teacher Evaluation: A Study of Effective Practices" in Klein, Karen ed. Evaluation of Teaching: The Formative Process. Center on Evaluation Development and Research, Bloomington, IN, 1984.

A preliminary survey of 32 school districts identified as having highly developed teacher evaluation systems revealed that although these systems appeared similar in broad outline, there was considerable variation upon actual implementation. Results indicated that school authorities did not agree on what "constitutes the best practice with regard to instrumentation, frequency of evaluation, or the role of the teacher in the process." Nearly all respondents indicated that principals lacked sufficient resolve and competence to evaluate accurately.

After preliminary evaluation, four districts with apparently successful systems were selected for case studies: Salt Lake City, Utah; Lake Washington, Washington; Greenwich, Connecticut; and Toledo, Ohio. Despite major differences in form, four common factors were seen as instrumental to their success: serious organizational commitment; insured and verified evaluator competence; teacher/administrator collaboration; and compatiblity with support systems and the districts goals. Twelve specific recommendations for development and implementation of successful teacher evaluation systems were derived from the findings (See Appendix E).

Peterson, Ken and Kauchak, Don. "Teacher Evaluation: Perspectives, Practices, and Promises." ERIC DOC. No. ED 233 996, 1982.

Peterson reflected that teacher evaluation has generally been based on tradition and has been relatively inconsistent. "Short term solutions are not possible," he wrote; and research, development, and planning should include teachers, local school districts, state legislators, state boards of education, and teacher education institutions.

The article reviewed and thoroughly documented the efficacy of nine teacher evaluation techniques:

Credentials-- correlations between teacher credentials and student learning has been weak or non-existent

Personal Characteristics-- an often used method which has not been linked to student learning and has demonstrated little consistency or objectivity among raters

Pupil Achievement-- Parental expectations, prior achievement,

socioeconomic status, and the general intellectual quality of the home all have had a greater influence on learning than teacher behavior

Classroom Visits-- This mainstay of teacher evaluation in practice, has not been shown to be reliable. Rating scales typically are more indicative of the rater's point of view than of teacher performance--usually combines formative and summative purposes

Self Report-- Some usefulness for formative purposes, little correlation between it and student evaluation

Student Reports-- Usually high reliability--.8 to .9 common in the literature--large numbers available for data source, not appropriate at all levels

Peer Review-- Not administratively sanctioned, low credibility to outside audiences, reliability problems with classroom visits

Competency Based-- Competencies vary according to age, prior achievement, size of class, school morale socioeconomic status, etc.--state of the art not sufficient to accomodate accurately

Systematic Observation-- Best available if done correctly:

1. Observer trained and checked for reliability in practice.
2. Number and timing of visits planned (fair and varied sampling--about 8 visits)
3. Focus limited to visible categories proven to be reliably observable and related to student achievement
4. Recording system simple, systematic, and verifiable
5. Data analyzed with a single, coherent framework, i.e. student achievement

Peterson and Kauchak suggested a combination of peer review, student reports, and systematic observation. Academic screening at the preservice level was seen as paramount.

## METHODS AND PRACTICES OF EVALUATION--SUMMARY

The bulk of the literature indicated current evaluation practices for public school teachers to be inadequate. Rating scales were shown to lack validity by Soar, et al., Wise. et al., Peterson and Kauchak, and others. Soar indicated that even "the best of scales," if not empiracally tested, often show negative correlations with educational goals. Peterson and Kauchak, Soar, et al., Teacher, and others found no consistent relationship between scores on the NTE (or any other written test) and pupil achievement. Summers and Wolfe relate a negative correlation between NTE's and pupil achievement (12). Piper and O'Sullivan reported a significant positive correlation between NTE's and supervisors' ratings of student teachers but this is an exception. Quirk, Teacher, Summers and Wolfe, and others have reported no significant relationships between NTE's and ratings by supervisors or school administrators. Lines, Menacker, Andrews (13), and others reported highly disproportionate effects for minorities where written competency tests were required. Student achievement has been shown to be highly influenced by factors other than teacher behavior by Peterson and Kauchak, Soar, et al., Rosenshine, and Medley. Brophy and Good, Gage (14), Peterson and Kauchak, and Soar, et al. all indicated that an adequate evaluation system must incorporate a low-inference rating scale, developed through research on teacher

effectiveness, and systematically implemented by trained evaluators. Finally, Steelman demonstrated that even reliable tests, that on the surface appear valid in various contexts, can become grossly invalid when used for purposes other than the original intent. Despite these problems, a few school systems have developed teacher evaluation systems that have reportedly been successful (Streifer and Iwanicki, Waters and Wyatt, and Wise, et al.).

## EFFORTS TO IMPROVE

Campbell, Lloyd P. and Williamson, John A. "Teaching Competencies for Supervising Teachers." ERIC DOC. No. ED 100 935, 1974.

A questionaire was completed by a random sample of university faculty who supervised student teachers, student teacher placement directors, principals, and teachers who had supervised two or more student teachers. It is interesting to note that each of the four groups questioned identified five competencies and ranked them in exactly the same order:

1. Classroom instruction
2. Human Relations
3. Planning
4. Evaluation
5. Professionalism

Kelleher, Paul. "Inducing the Incompetent Teacher to Resign." Phi Delta Kappan. Vol. 66, No. 5, 1985.

An incompetent teacher was defined as "one who demonstrates inability to meet minimum standards of performance over a number of years." The procedure, to be carried out with compassion but with the utmost clarity and objectivity was outlined as follows:

1. Teacher must clearly understand what the problems are
2. Teacher must hear same message from people at different levels and positions
3. Teacher must receive written evaluation plan
4. Teacher must know that failure to improve will bring an escalating series of consequences

Kelleher maintained that as the evaluation becomes increasingly public, the teacher will either improve or resign. He cited several case examples (mostly personal) as evidence.

Bridges, M. Edwin. "It's Time to Get Tough With the Turkeys." Principal. Vol. 64, No. 3, 1985.

Bridges presented a brief essay intended to inspire administrators to do a more effective job of purging public school classrooms of incompetent teachers. He attempted to discourage possible rationalizations by quoting statistics regarding successful dismissal cases: 66% of dismissal cases later taken to court were upheld between 1939 and 1982; considering resignations occurring as a direct result of

dismissal proceedings in addition to court upheld cases, the rate for the period of 1975-1979 was 74%.

Lehr, Milt. "Changes in Teacher Education: The Holy Grail of Quality." ERIC DOC. No. ED 202 805, 1981.

The 1980 Oklahoma legislature passed House Bill 1706, which, among other things, mandated that:

1. Teacher candidates must pass a curriculum exam in their respective field
2. Schools of Education implement higher admission requirements
3. Certification be postponed until after the first successful year of teaching as an apprentice under a paid and carefully selected supervising teacher.
4. Every college and university instructor involved in teacher education programs must teach in public schools every five years for at least a half day for one semester

In response, the Teacher Education Committee at Northwestern Oklahoma State University approved the development of a competency based teacher education program. In an attempt to establish competency priorities, questionaires were distributed among university faculty and public schools. Three hundred ninety-one educators from 63 schools returned usable surveys. One finding was that university staff and educators from public schools differ considerably in regard to competency priorities. Lehr found no research indicating the relative accuracy of the two groups.

Barr, Robert D., "New Ideas for Teacher Education." Phi Delta Kappan. Vol. 66, No. 2, 1984.

Barr described the Oregon State University/Western Oregon State College (OSU/WOSC) School of Education's "warranty assurance" of its graduates.

If, after evaluation by the building principal, a recent graduate is found to be deficient in specific teaching skills or knowledge, OSU/WOSC will review the evaluations, help design the plan of assistance, and provide consultant services to both the school system and the teacher. This includes the opportunity for additional course work--all at no cost to the student (recently graduated teacher) or the school system for which he/she works; OSU/WOSC absorbs all costs.

Barr maintained that making schools of education responsible for the quality of their certified graduates would help insure a quality program.

Scannell, Dale P. "The Extended Teacher Education Program at The University of Kansas. "Phi Delta Kappan. Vol. 66, No. 2, 1984.

Scannell reminded readers that suggestions of a five year course of study for teachers were as old as Sputnik. Market trends affect educational decisions just as in business, however, and teacher shortages made five year programs unfeasible.

Scannell detailed the background of the five year program implemented at the University of Kansas. Planning began in 1979 and the first graduating class was 1984-85. He reported enrollment in the new program approximately equal to previous years and average ACT scores of students in the new five year program were higher than those in the old four year program.

Smith, David C., et al. "ProTeach: Professional Teacher Preparation at The University of Florida." Phi Delta Kappan. Vol. 62, No. 2, 1984.

This article detailed the five year program required for initial certification and a master's degree at the University of Florida. Secondary teachers receive a bachelor's degree from the College of Liberal Arts and Sciences with a subject major; elementary teachers still graduate from the School of Education,but are not recommended for certification until they have successfully completed their fifth year of study. It was emphasized that this is an integrated five year plan markedly different from the more traditional undergraduate plus master's programs.

Several factors influenced the decision to opt for a five year certification, many of them political in origin. In addition, it was felt that the knowledge base associated with teaching and learning was continually expanding and becoming more complex and a five year program was needed to adequately prepare students for the task. It should also be noted that at the time, the supply of teachers greatly exceeded the demand in Florida, making a five year program seem practical from many points of view.

Murnane, R. "Understanding the Sources of Teaching Competence: Choices, Skills, and the Limits of Training." Teacher's College Record. Vol. 84, No. 3, 1983.

The author identified three sources of teaching competence: intellectual ability, on the job experience, and formal preservice teacher education. Murnane further reviewed a number of studies related to teacher competence. Murnane generally concluded that the most intellectuallly capable teachers should be recruited by school districts, and further, suggested that emphasis on graduate studies may be misguided. Salary increases for classroom teachers was proposed along with careful scrutiny of school personnel offices in regard to hiring practices. Changing the structure of preservice training was not seen as viable.

"Investing in Our Children. Business and the Public Schools." ERIC DOC. No. ED 261 117, 1985.

This document focused on four major issues: (1) student's future employability; (2) maximizing returns on the national educational investment and increasing that investment; (3) upgrading teacher professionalism and competence; and (4) collaborative efforts of schools and business.

Broad in its scope and over 130 pages long, the findings and ideas presented were, of course, numerous. Among those relating to teaching and teacher evaluation were the following. In absolute terms the average teacher's pay declined 15% from 1973 to 1985. Parents wanting their children to teach dropped from 75% in 1969 to 45% in 1984; low pay was cited as the key factor. It was projected that 1.3 million new teachers would be needed nationally by 1990 and extensive shortages were predicted by 1992. According to the article, 82% of the institutions that have teacher education programs ignore both the SAT and the ACT when considering applicants.

Recommendations included substantial pay increases at the entry level coupled with opportunities for accelerated pay increases via carreer ladders or outstanding performance, teacher participation in evaluation, and a sharp curtailment or elimination of nonprofessional clerical and housekeeping duties. Raising the entrance requirements to schools of education and requiring certificate candidates to demonstrate competency in subject matter, professional knowledge, and professional skills were also promoted.

## EFFORTS TO IMPROVE--SUMMARY

Campbell identified classroom instruction as the competency regarded by virtually all educators as the most important. Suggested methods for improving the quality of teaching generally belong to one of six main categories: higher standards for admission to education schools, redefined and more stringent requirements within schools of education that reflect current research findings, higher standards for teacher certification, more effective selectivity in hiring practices, modification of evaluation practices, and more attractive working conditions including salary increases.

Peterson (1982--22), Perry (1981--8), Weaver (1984--5), Clark (1984--4), Investing, Lehr, and others all supported higher admission standards for schools of education. Weaver, however, predicted that such implementation was highly improbable unless state or federal mandates forced compliance. Clark, Lehr, Scannell, and Smith all supported a five year course of study and detailed such programs already in effect in Oklahoma, Kansas, and Florida. Lehr also discussed the teacher-apprenticeship program in Oklahoma. Weaver saw diversifying education schools to broaden the market demand as the only realistic hope of maintaining high standards in an open market economy. Barr described Oregon State's "warranty insurance" program in which the school guarantees the quality of its graduates. Smith, Lehr,

Peterson, Teacher (18), Investing, Murnane, Andrews (13), and, with some reservations, Soar, et al. (21), all recommended some form of minimum competency testing for certification.

Perry and Murnane both cited evidence that school personnel officials were not beneficially selective in their hiring practices. Perry concluded that administrators were disregarding assessment tools that were readily available.

One purpose of teacher assessment was instructional improvement. As previously mentioned, Brophy and Good (15), Soar, et al., and Peterson and Kauchak identified a systematic observation technique using low-inference rating scales developed through research on teacher effectiveness as the most reliable method available. Research by Brophy and Good, Soar, et al., Andrews, and Gage (14) clearly indicated a few specific teacher behaviors that should be developed in regard to time management, classroom climate, and type of instruction. In regard to dismissal practices, Hathaway (1982--11) found that less than one half of one per cent of public school teachers were dismissed. Bridges, and Kelleher encouraged strict summative evaluation procedures as an obligation to administrators and outlined methods for successful implementation.

Both Gallup (1984--10) and Hathaway found the public generally unwilling to increase school funding or teacher salaries. Investing, National (1983--6), Murnane and others view an increase in teacher salaries paramount in attracting highly

competent people to the field. Weaver determined that higher teacher salaries, indirectly manipulated via influencing market forces as the only workable method to lure a larger, more competent group.

# DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

## Discussion and Conclusions

Considerable evidence has been reviewed indicating that the quality, competence, and therefore effectiveness, of our teaching force is in question. To the extent that this is true, our students, and ultimately our society, suffer the consequences. Steps toward progressive reform, while not universally accepted, are evident in the literature. Areas of consideration include schools of education entrance requirements and curriculum, state certification requirements, district evaluation practices and personnel decisions, and inservice training for teachers. From these areas, three broad recommendations can be identified: (1) insure competency in certified teachers; (2) employ the best of those certified; and (3) insure continued professional growth of teachers subsequent to employment.

While there were isolated examples of research that indicated significant positive correlations between paper-and-pencil test scores and teacher effectiveness, the vast majority of these studies indicated little or no relationship between teacher test scores and teacher success as determined by any other measure (Soar 1983, et al. and others). Yet it is obvious that some minimum level of competence is necessary to achieve effectiveness. It is not that teacher competence or teaching strategies are insignificant, rather the tests, or the

data with which they are correlated, or both, lack sufficient validity and/or reliability for meaningful analysis.

At the same time, the need to evaluate teacher candidates is real. There is ample evidence that, for the most part, schools of education have done a woefully inadequate job of screening both applicants and graduation candidates (Andrews, 1982, Clark, 1984, Investing, 1985, Olsen, 1985, Perry, 1981, Teacher, 1982, and Weaver, 1979 & 1984). It appears that colleges, competing for students in a free market society, have acquiesced to self-serving decisions that were not made with national interests in mind. Education schools cannot be blamed for the size or competence of the applicant pool, nor perhaps even for the self-preservation practices of lowered admission standards and, precipitously, lowered academic and graduation requirements; any discipline will, above all else, avoid extinction (Weaver, 1984). This rationalization, however, does nothing to alleviate the problem.

Partially in response to public and political pressures, teacher tests have been developed in an effort to evaluate professional competence. The most commonly used of these tests have been norm referenced (ie. NTE) and only differentiate between members of an already suspect group. Where criterion referenced tests are used, minimum standards are often influenced more by market realities of teacher shortages rather than

empirical educational research (Weaver, 1984, Gage, 1984, Investing, 1984, and Schlechty and Vance, 1981).

## Recommendations

The need for the development of valid, criterion referenced teacher exams seems clear. Process-product studies and other relatively recent research methods offer some promise of realization (Brophy and Good, 1986, and others). Until such tests are developed, those currently available that distinguish a reasonable level of literacy, along with subject area tests, should be utilized. Many states (usually where supply exceeds demand) have already taken this approach (Smith, 1984, and Andrews, 1982). Such requirements, if mandated at a federal, or at least state level, would force schools of education to be more accountable for their programs. Schools whose graduates consistently failed certification tests would be forced to make necessary revisions in their practices or self-destruct.

Local or regional seminars designed to maintain knowledge of current research findings should be required for instructors in schools of education at least once every three years. Where appropriate, incorporation of this knowledge in teacher certification tests would help secure its inclusion in the curriculum.

## Discussion and Conclusions

Teacher evaluation takes two forms: formative, the purpose of which is improvement via directed experience; and summative, the purpose of which is employment decisions. Most districts combine these forms to the detriment of both (Peterson and Kauchak, 1984). Evaluators may feel reluctant to recommend termination, as to do so admits failure to affect improvement. Teaachers may be less than honest in the process in an attempt to protect their position. Summative purposes require standardized, objective data. Formative purposes require more descriptive information and meaningful, realistic methods for improvement with follow-up supervision. To be effective, both require major organizational commitment (Wise, et al., 1984).

A prerequisite to valuable reform in evaluation practices is competent administration. While this presumption is debatable, its concern is beyond the scope of this paper (Perry,1981).Since administration draws heavily from the teaching force, improvement there would ultimately result in a more competent administration. Given the complicated nature of the teaching profession, it would be both inadequate and unfair to base judgments on a numerical consideration alone.

Self-undserstanding, openess, job satisfaction, flexibility, empathy, appreciation of children, and other such variables may have as much impact on teaching effectiveness as degrees, certifications, or test scores. Unfortunately, currently

available techniques fail to measure these characteristics with any degree of consistency or reliability, much less correlate them with student achievement or other educaational goals. Open-ended, or high-inference, scales attempting evaluation of these characteristics are interpolated with problems of the nonstandardized nature of the instruments, preconcieved beliefs inherent to the rater for which there is no control, and the halo effect (Soar, et al., 1983).

Given this immature state of the art, it is highly improbable that consistent and accurate judgments of teacher effectiveness will be made. There is however, much that can be done to improve the current level of practice. Several specific teacher behaviors have been associated with student achievement (Brophy and Good, 1986, and others). This research is not without criticism: they are correlational studies which do not establish cause and effect; they ignore teacher intent, failing to account for varying, but situationally specific needs; they do not identify optimum levels of these behaviors (Brophy and Good, 1986).

It should be noted here, that a major criticism of using student achievement gains to evaluate teachers was based on hopelessly confounding variables such as parental expectations, socioeconomic status, prior achievement, ad infinitum. If student achievement is an invalid indicator of teacher effectiveness it must also be suspect as a dependent variable in

correlational research. Research has shown that teachers trained in these behaviors (identified by recent process-product research) do show marked improvement in their ability to affect student achievement (Gage, 1984). This leads the author to believe that student achievement is not as hopelessly confounded as present writers indicated, and that hope for refinement is not so infeasible.

Recommendations

Personnel officials should employ the utmost discretion during the interview process. Hiring good teachers, while not without effort, is far easier than terminating poor ones. Other considerations equal, intelligence and achievement test scores should be consulted along with indications of a high level of commitment to the profession. Reputations of relevant education schools should be considered. Districts should commit a high level of resources to the evaluation program, particularly for formative purposes which should include:

1. Low-inference rating scales with uniform rating scales developed from empirical evidence in regard to district goals, presumably student achievement among others.
2. Trained evaluators proven reliable in clinical situations.
3. Peer involvement (teachers involved should be temporarily released from classroom responsibilities).
4. A trained panel composed of teachers and administrators to oversee evaluators decisions.

Those involved in evaluation should also be required to attend the local/regional seminars recommended for education school instructors, above. The development and implementation of statistical formulas capable of compensating for factors confounding student achievement scores could provide uniform measures of teacher effectiveness. In addition to seminars already mentioned, a variety of courses designed to keep educators abreast of current research should be required of all teachers and evaluators every few years.

## Discussion and Conclusions

Up to this point this discussion has focused exclusively on the selection and training of teachers. To stop here would be to ignore the realities of market forces. The discrepancies between public opinion and school teachers as well as current recommendations from the literature in regard to teacher salaries is enormous. Despite all best efforts, an ample quantity of competent people are not attracted to the field.

## Recommendations

A substantial increase in salary would not only attract more people in its own right, but the corresponding rise in social status that accompanies higher salaries would further increase the desirability of the profession. Professional advertisers should be employed to develop media campaigns to change public opinion so that necessary financial resources can be secured.

## FINAL COMMENT

There is much that can and should be done to improve the current level of teacher effectiveness. More progressive groups have already made imaginative policy and program reforms based on current research. The vast majority of those invloved in education, however, need prodding.

A certain number of teachers is required nationally to fill our classrooms. Where competent teachers cannot be found, incompetent ones will be used. A substantially higher financial commitment from the general public, therefore, is a necessary prerequisite to assuring top level people in the field of education.

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APPENDIX A
(Weaver, 1984)

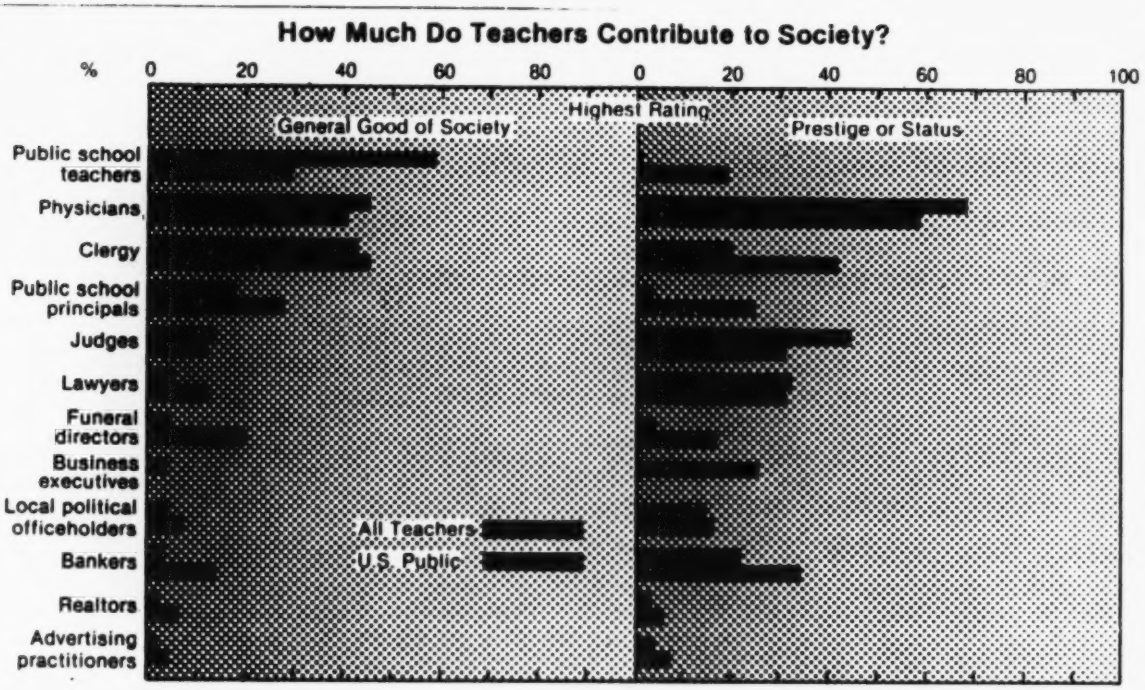
**Scholastic Aptitude Test (SAT) Scores of College-bound Seniors, by Intended Area of Study: 1973 to 1981**

| Intended Area of Study | 1973 | | 1975 | | 1977 | | 1979 | | 1981 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Verbal | Math | Verbal | Math | Verbal | Math | Verbal | Math | Verbal | Math |
| | Mean Test Score | | | | | | | | | |
| National total | 446 | 481 | 434 | 472 | 429 | 478 | 427 | 467 | 426 | 466 |
| Art and humanities | – | – | – | – | 444 | 480 | 438 | 452 | 434 | 463 |
| Architecture/ environmental design | 438 | 515 | 430 | 507 | 425 | 506 | 418 | 496 | 414 | 489 |
| Art | 440 | 461 | 435 | 446 | 412 | 425 | 404 | 421 | 403 | 421 |
| English/literature | 500 | 481 | 463 | 463 | 504 | 478 | 506 | 472 | 507 | 482 |
| Foreign language | 491 | 498 | 481 | 496 | 481 | 483 | 475 | 476 | 474 | 477 |
| Music | 465 | 467 | 448 | 464 | 445 | 483 | 437 | 458 | 435 | 454 |
| Philosophy and religion | 478 | 500 | 468 | 484 | 467 | 487 | 468 | 482 | 463 | 481 |
| Theater arts | – | – | – | – | 447 | 439 | 437 | 433 | 438 | 438 |
| Biological sciences and related areas | – | – | – | – | 438 | 478 | 435 | 472 | 433 | 472 |
| Agriculture | 427 | 471 | 423 | 468 | 418 | 467 | 406 | 443 | 404 | 440 |
| Biological sciences | 483 | 533 | 481 | 526 | 476 | 518 | 472 | 507 | 471 | 504 |
| Forestry/conservation | – | – | – | – | 426 | 467 | 420 | 456 | 418 | 462 |
| Health and medical | – | – | – | – | 433 | 474 | 430 | 469 | 428 | 469 |
| Nursing and health | 419 | 444 | 418 | 444 | – | – | – | – | – | – |
| Business, commerce, and communication | – | – | – | – | 412 | 464 | 408 | 448 | 406 | 446 |
| Business and commerce | 408 | 463 | 406 | 461 | 402 | 453 | 400 | 447 | 398 | 446 |
| Communications | 478 | 483 | 458 | 481 | 459 | 460 | 448 | 449 | 443 | 446 |
| Physical sciences and related areas | – | – | – | – | 484 | 548 | 448 | 536 | 443 | 527 |
| Computer science/systems analysis | – | – | – | – | 422 | 505 | 419 | 498 | 416 | 492 |
| Engineering | 480 | 548 | 450 | 541 | 448 | 548 | 446 | 536 | 446 | 534 |
| Mathematics | 481 | 586 | 463 | 580 | 464 | 588 | 458 | 580 | 453 | 572 |
| Physical sciences | 505 | 570 | 501 | 565 | 500 | 572 | 488 | 561 | 488 | 558 |
| Social sciences and related areas | – | – | – | – | 432 | 453 | 429 | 449 | 429 | 448 |
| Education | 418 | 449 | 406 | 434 | 408 | 426 | 392 | 420 | 391 | 419 |
| Ethnic studies | – | – | – | – | 381 | 398 | 372 | 368 | 381 | 395 |
| Geography | – | – | – | – | 421 | 473 | 438 | 481 | 422 | 474 |
| History and cultures | – | – | – | – | 478 | 474 | 478 | 471 | 482 | 472 |
| Home economics | 413 | 441 | 409 | 442 | 399 | 428 | 339 | 417 | 383 | 411 |
| Library science | – | – | – | – | 478 | 453 | 476 | 448 | 464 | 431 |
| Military science | – | – | – | – | 435 | 489 | 434 | 481 | 433 | 474 |
| Psychology | – | – | – | – | 444 | 456 | 436 | 447 | 433 | 447 |
| Social sciences | 478 | 490 | 486 | 478 | 458 | 474 | 466 | 472 | 456 | 474 |
| Miscellaneous | – | – | – | – | 431 | 473 | 428 | 458 | 428 | 458 |
| Other | – | – | – | – | 422 | 458 | 388 | 430 | 396 | 431 |
| Trade and vocational | 400 | 450 | 370 | 406 | 367 | 400 | 383 | 394 | 358 | 391 |
| Undecided | – | – | – | – | 448 | 491 | 441 | 480 | 440 | 480 |
| Other/undecided | 448 | 488 | 438 | 477 | – | – | – | – | – | – |

– Not available.

Note: 1973 and 1975 data are based on a 10 percent random sample.

APPENDIX B
(Gallup, 1985)



# APPENDIX C
# (Quirk, 1973)



*Studies of the Concurrent Validity of the NTE*

| *Study* | | *N* | *Predictor* | *Criterion* | *Correlation* |
|---|---|---|---|---|---|
| Seagoe (1949) | (a) | 11 | WCET | Qualifying Exams | .78 |
| | (b) | 19 | WCET | Qualifying Exams | .26 |
| Shea (1955) | | 110 | WCET | Coop. Gen. Cult. Test | .77 |
| | | | | ACE Psychol. Exam | .70 |
| | | | | Coop. Eng. Exam | .64 |
| | | | | Coop. Contemp. Affairs Test | .64 |
| | | | | Undergraduate GPA | .52 |
| | | | | Practice Teaching Grades | −.01 |
| Capps & DeCosta (1957) | | 410 | WCET | Grades in four basic grad. courses | .44 |
| McCamey (1958) | | 211 | NTE Prof. Info. | GPA in education courses | |
| | | | | a) pre-school primary (N = 35) | .30 |
| | | | | b) elementary (N = 95) | .23 |
| | | | | c) secondary (N = 81) | .28 |
| Simpson (1962) | | 1636 | WCET | Age | .03 |
| | | | | Years of Teaching Experience | .01 |
| | | | | Grades in Prof. Ed. courses | .36 |
| | | | | Grades in General Ed. courses | .33 |
| | | | | Grades in Teaching Field | .29 |
| | | | | No. degrees held | .29 |
| Pitcher (1962) | | 51-164 | WCET | Undergraduate GPA | range .38-.74 |
| | | | | | wt. average .57 |
| Johnson (1963) | | 35 successful students | WCET | GRE Adv. Test in Education | .51 |
| | | | | GRE-V | .77 |
| | | | | GRE-Q | .54 |
| Thacker (1964) | | 100 | WCET | Undergraduate GPA | .48 |
| | | | | General Education GPA | .52 |
| | | | | Professional Education GPA | .15 |
| | | | | GPA for Prof. Ed. + Gen. Ed. | .54 |
| | | | | Major Field GPA | .35 |
| Eissey (1967) | | 111 | WCET | Internship GPA | .01 |
| | | | | Undergraduate GPA | .23 |
| | | | | Professional Education GPA | .19 |
| | | | | Teaching Field GPA | .16 |
| Walberg (1967) | | 280 | WCET | High School GPA | .10 |
| | | | | Undergraduate GPA | .36 |
| | | | | Practice Teaching Grade | −.04 |
| Duncan (1971) | | 62 | WCET | Psychology GPA | .62 |
| | | | | Education GPA | .58 |
| | | | | Major Field GPA | .55 |
| | | | | Total GPA | .62 |

*Predictive Validity of the NTE and Supervisors' Ratings, Pupil Ratings, Pupil Residual Gain Scores, and Classroom Observations*

| *Study* | *N* | *Predictor* | *Criterion* | *Correlation* |
|---|---|---|---|---|
| Flanagan (1941) | 49 | WCET | Supervisors' Rating | |
| | | | 1) overall judgment of teacher's gen. effectiveness and desirability | .51 |
| | | | 2) reasoning and problem-solving ability | "around .50" |
| | | | 3) judgment and perspective in making decisions and choices | "around .50" |
| | | | 4) breadth and cultural education | "around .50" |
| | | | 5) understanding of current social problems | "around .50" |
| | | | 6) ability to offer wise guidance | "around .50" |
| Lins (1946) | 29 | NTE | Composite Rating (3-5 raters) | −.15 |
| Ryans (1951) | (a) 192 elementary teachers | NTE Subtest on Gen. Prin. & Meth. of Teaching | Principal Rating | |
| | | | a) observation blank | .17 |
| | | | b) general eval. | .23 |
| | (b) 165 secondary teachers | NTE Subtest on Gen. Prin. & Meth. of Teaching | Principal Rating | |
| | | | a) observation blank | .13 |
| | | | b) general eval. | .15 |
| Delaney (1954) | 93 | WCET | Composite Rating | .17 |
| Shea (1955) | 110 | WCET | M-Blank Rating by Superintendent, Principal, or Supervisor | .45 |
| Thacker (1964) | 100 | WCET | Principals' Rating | .18 |
| | | | Supervisors' Rating | .17 |
| Eissey (1967) | 111 | WCET | Principals' Rating | |
| | | | a) 1st year | .10 |
| | | | b) 3rd year | .10 |
| | | | Internship Ratings | |
| | | | a) Directing Teacher | .14 |
| | | | b) University Supervisor | .09 |
| Walberg (1967) | 280 | WCET | Principal Rating | .00 |
| | | | Supervisor Rating | |
| | | | a) Personal Characteristics | .03 |
| | | | b) Classroom Performance | .02 |
| Carson (1969) | 241 | WCET | 12-week Principal Rating | |
| | | | a) personal efficiency | .08 |
| | | | b) social efficiency | .13 |
| | | | c) prof. attitude | .09 |
| | | | d) cooperation | −.03 |
| | | | e) skill in teaching | .16 |
| | | | f) class management | .04 |
| | | | g) general rating | .11 |
| | | | h) composite rating | .10 |
| Lins (1946) | 26 | NTE | Pupil Ranking | .30 |
| Lins (1946) | 7 | NTE | Pupil Average Residual Gain | .15 |
| Medley & Hill (1970) | 53 | NTE Common Exams special subtests | Flanders: Lecturing Behavior | $R_{xy}$ = 66 |

APPENDIX D
(Streifer and Iwanicki, 1985)

Eighty-five Teacher Cpmpetencies

1. Demonstrates facility in the skills of reading, writing and mathematics

2. Demonstrates knowledge of the subject to be taught

*2.1 Knows and understands the major principles and concepts of the material to be taught

2.2 Perceives accurate and up-to-date knowledge of subject matter

*2.3 Understands the purpose and value of the material to be taught

*2.4 Is able to formulate meaningful questions about the subject matter

2.5 Knows appropriate sources of additional information about the material to be taught

3. Demonstrates knowledge of human growth and development as it relates to the teaching-learning process

3.1 Knows and understands the major theories of human development

3.2 Understands how physical, social, emotional and intellectual development relate to planning and organizing instruction

3.3 Knows about various teaching styles and learning styles and understands their interrelationship

3.4 Recognizes the conditions and needs of special students

4. Demonstrates a knowledge of the American public school system

4.1 Knows and understands the governance of schools from the local, state and federal levels

4.2 Understands how the organization of the district and school has an impact upon the individual teacher

4.3 Understands the rights and responsibilities of students, parents and teachers

5. Plans instruction to achieve selected objectives

*5.1 Identifies and sequences goals of instruction

*5.2 Identifies and sequences objectives for instruction

*5.3 Identifies teaching procedures and sequences learning activities

*5.4 Selects appropriate human resources materials and media

*5.5 Plans instructional activities which provide for individual differences

6. Effectively implements instructional plans and uses appropriate instructional techniques

*6.1 Presents material at a level appropriate to the needs, interests, ability and background of students

*6.2 Conducts learning activities in a logical sequence which is flexible and developmentally appropriate

*6.3 Provides illustrations, examples and applications of the material

6.4 Uses a variety of instructional materials and media

6.5 Uses a variety of instructional methods and incorporates advancing technology

6.6 Uses a balance of individual, small group and large group instructional arrangements

6.7 Provides instructional activities that foster student involvement

6.8 Matches teaching styles and methods with the learning situation and the learning styles of students

6.9 Revises instruction on the basis of student comments, questions and performance

7. Effectively communicates with students

7.1 Provides directions and explanations in a clear, coherent and logical manner

7.2 Uses acceptable written and oral expressions with students

7.3 Provides for two-way communication with students throughout lessons

7.4 Establishes rapport and fosters positive reinforcement through verbal and non-verbal communication

7.5 Communicates personal enthusiasm and self-confidence

7.6 Outlines expectations for students in a clear manner

7.7 Communicates with students both individually and collectively about their needs and progress

8. Helps students develop positive self-concepts

8.1 Recognizes and understands the worth of all students and the opportunities that racial, cultural, sexual and religious diversity present in the classroom

- *8.2 Demonstrates sensitivity to and respect for the needs and feelings of all students
- *8.3 Demonstrates patience, empathy and enthusiasm

9. Facilitates the independence of the student as learner

- 9.1 Recognizes and encourages the special interests and abilities of individual students
- 9.2 Engages students in selecting their own learning objectives and activities
- *9.3 Poses probing questions that stimulate students to recall, analyze, synthesize and evaluate
- *9.4 Presents opportunities that foster thinking skills and problem-solving skills
- 9.5 Assists and encourages students to research issues and questions of concern to them
- 9.6 Promotes students' ability to communicate effectively with others about ideas and concerns

10. Effectively organizes time, space, materials and equipment for instruction

- *10.1 Establishes and maintains classroom routines and procedures
- *10.2 Uses instructional time effectively, paces instructional activities appropriately and maximizes students' time on task
- *10.3 Provides a learning environment that is attractive and orderly

11. Effectively assesses student needs and progress

- 11.1 Selects appropriate materials and procedures for assessing student progress on objectives

11.2 Diagnoses entry-level skills and knowledge of students

11.3 Recognizes when students are deficient in the basic skills and provides or recommends corrective action

11.4 Uses information from system-wide standardized testing when appropriate to plan instruction

11.5 Creates or selects evaluation instruments or procedures to obtain information for monitoring student progress and effectiveness of instruction

*11.6 Develops and maintains systems for keeping group and individual records

11.7 Evaluates students on the basis of criteria that are aligned with instructional objectives

12. Effectively meets the needs of exceptional students

12.1 Obtains and uses information about students from available records

12.2 Identifies students who require the assistance of specialists

12.3 Obtains and uses information from colleagues to assist students with special needs

*12.4 Provides appropriate instruction to students with special needs

13. Establishes a positive learning environment

*13.1 Establishes and maintains appropriate behavior standards for students in the learning environment

13.2 Develops an atmosphere which fosters self-discipline

13.3 Promotes positive interpersonal relations based upon mutual respect

*13.4 Handles discipline fairly and consistently

14. Meets professional responsibilities

*14.1 Demonstrates responsibility for self-growth, professional improvement and ongoing self-evaluation

*14.2 Works cooperatively with colleagues and administrators

*14.3 Follows the policies, procedures and curricula of the school district

14.4 Demonstrates ethical behavior

15. Encourages and maintains the cooperative involvement and support of parents and the community

15.1 Establishes ongoing two-way communication with parents based on mutual respect

15.2 Provides opportunities for parent and community involvement

15.3 Obtains and uses information about students from parents

15.4 Communicates goals and objectives for both program and students to parents

15.5 Conducts effective parent-teacher conferences

15.6 Uses community resources in instruction

APPENDIX E
(Wise, et al., 1984)

Twelve Recommendations for a Quality Teacher Evaluation Program

1. The school district should examine its educational goals, management style, conception of teaching, and community values and adopt a teacher system compatible with them. It should not adopt an evaluation system simply because that system works in another district.
2. States should not impose highly prescriptive teacher evaluation requirements.
3. The school district should give sufficient time, unencumbered by competing administrative demands, for evaluation. This may mean assigning staff other than the school principal to some evaluation functions.
4. The school district should regularly assess the quality of evaluation, including individual and collective evaluator competence. The assessments should provide feedback to individual evaluators and input into the continuing evaluator training process.
5. The school district should train evaluators in observation and evaluation techniques, including reporting, diagnosis, and clinical supervision skills, when it adopts a new teacher evaluation process.

6. The school district should examine its existing teacher evaluation system to see which, if any, purpose it serves well. If the district changes the purpose, it should change the process.
7. The school district should decide whether it can afford more than one teacher evaluation process or whether it must choose a single process to fit its main purpose.
8. The school district must allocate resources commensurate with the number of teachers to be evaluated and the importance and visibility of evaluation outcomes.
9. The school district should target resources so as to achieve real benefits.
10. The school district should involve expert teachers in the supervision and assistance of their peers, particularly beginning teachers and those in need of special assistance.
11. The school district should involve teacher organization in the design and oversight of teacher evaluation to ensure its legitimacy, fairness, and effectiveness.
12. The school district should hold teachers accountable to standards of practice that compel them to make appropriate instructional decisions on behalf of their students.

## STUDENT QUALIFICATIONS

Name and Address:

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Educational Background:

Cassopolis High School
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University of Michigan
Ann Arbor, MI
BA (Psychology), 1977

Indiana University
South Bend, IN
Graduate Credit: 33 hrs.

Educational Employment Experience:

Elkhart Community Schools
Elementary Teacher (Grades 4-6)
1978-1986

Qualifications and Interest:

This project related directly to my profession and my efforts to improve my own effectiveness and gain greater insights and understanding into the larger problems of the educational community.